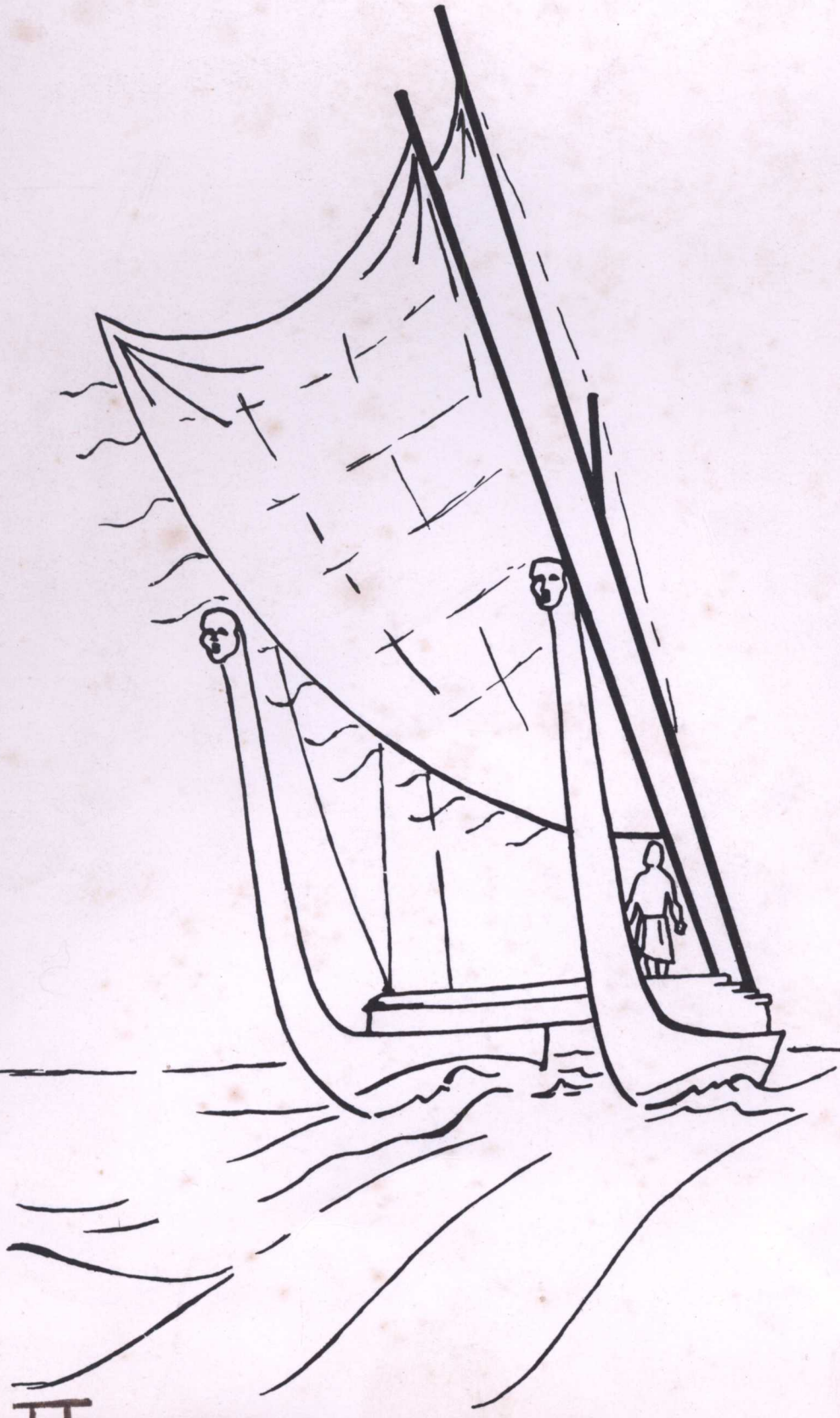
the sailorman



II

Spring 1968

Oh! hush thee, my baby, the night is behind us,
And black are the waters that sparkled so green.
The moon, o'er the combers, looks downward to find us
At rest in the hollows that rustle between.
Where billow meets billow, there soft be thy pillow;
Ah, weary wee flipperling, curl at thy ease!
The storm shall not wake thee, nor shark overtake thee
Asleep in the arms of the slow swinging seas.

EDITORIAL

Here it is then, the second edition of 'Sailorman', packed, I hope, with interesting facts and stories for all. Some articles have been held ove till the next edition as they arrived after this edition had 'gone to press'.

To help the next edition contain even more basic information for builders I am enclosing a survey sheet which, when completed, should give much valuable information on prices and availability of materials in various areas. If you could fill it in with as much information as you can (whether you are a builder or not) and return it to the editor as soon as possible it would help great deal. Also, if anyone wants to write to me for information about any problems that they have come across in the Polycat field (excluding design problems) I'LL do my best to obtain answers to their queries. (Please could you send a stamped, addressed enveloppe).

I take the oppurtunity to apologize to all those who are concerned over the fate of their subscriptions; the receipts are enclosed. I only sent receipts to those who had enclosed a stamped add. envel. as it seemed that we could save a reasonable amount of money by sending them out with this edition of 'Sailorman'.

Hope that those of you who are building a Catamaran are having as much success as we are - Dick, Rick, Nigel, Ellen, Jan and I - . "Kotchick", our boat, was started in Jan. and we hope to have it completed by the end of June, this year. In taking the first hull out of the barn in which we built it , she fell over on to her side. Rick was caught under her, but fortunately we quickly got him out. Amazingly enough he was fine apart from having bruised knees, much to our relief, and the boat was hardly scratched When, two weeks later, she fell over a second time we were not quite so lucky for she was holed in one place (well above the waterline, thank goodness) and 'damaged' in a couple of other places. This time we have learnt our lesson; you should see the chocks! Hope others can learn from our mistakes.

Well, I hope you all enjoy the Magazine and that it gives you some ideas for articles for the next one.

My new address is:

2, Chiltern Rd,

Dunstable,

BEDS.

How I became a Catamariner.

Unwittingly, I became a Catamaran sailor when I was II. An ardent Sea-Scout, I lived next to a big farm which contained a sheet of water of nearly an acre, which was used in the winters of the 'good old days' as a skating rink. I had the farmer's permission to sail my home-built, flat-bottomed Sharpie on it. It was a beautiful looking boat but, alas, my carpentry wasn't so hot for it sank within half an hour each time I went out!

Dejectedly, I pulled her up and pondered on methods of making her watertight; my sympathetic farmer asked why I didn't use one of his pig troughs to fool about in. These were made of wood (tarred over), IO' long and V shaped and were watertight. I paddled about in one for a while, needless to say spending a lot of the time the wrong way up. My farmer seemed to get a lot of fun out of my amphibious antics; then one day he asked, "Why don't you use two troughs and lash them together with cross-timbers?"

The idea brightened me up considerably and I immediately set about doing something with this brain-wave of my Polynesian-minded friend. I lashed an old door across the two troughs, having them about 3' 6" apart and with a Heath-Robinson rigged mast, a standing Lug-sail and using an oar for steering, I sailed most happily around the pleasant sheet of water for several months. I had built a Catamaran and didn't know it!! Unfortunately, the idea did not stick in my mind as my parents bought me a IO' Dinghy and so I entered the sailing world properly ..... with a monohull! Thus it remained for another fifty years, during which time I owned several boats varying from Dinghies to the biggest - a Harrison Butler Z 4-tonner.

In I960, I first noticed Catamarans in the Yachting Press and wrote to one or two of the Editors asking if a Cat. would be alright for sailing the 40' wide River Weaver here at Northwich, in Cheshire. The replies were discouraging: "Cats wont go about." "Too slow in light winds." "Easily capsized." etc,. But these adverse and discouraging comments didn't seem to fit in with articles I had read in Yachting Magazines of the I950's, especially those of James Wharram, about whose TANGAROA and its voyage across the Atlantic I had read and re-read. So without more ado, being an extreme extravert who likes to try things himself rather than slavishly taking somebody elses word for it, I sent for the plans of the I2' Water Cat, which I started building in Sept. I966. At the same time I contacted Jim Wharram at Deganwy, thereby starting a very happy relationship and opening the window - for myself - on to a new Sailing world.

I built the Cat in 3 weeks. It was a magnificent piece of ship building (for me, that is) and it was a great thrill, when I chucked her in the river and saw her floating well above her marks. Never will I forget that first real Cat sail. Remembering my first abortive ship-building efforts, I felt a bit apprehensive about leaks, but never a drop did she take.

Although the Water-Cat design called for a Lateen sail, I used the mast and Bermudan sloop sails from my old

Dinghy, and being a great experimenter I converted to a Wharram Spritsail after sailing his wonderful 22' HINA design at Deganwy. Then followed a specially made Chinese Junk Sail which I played about with for a few weeks. In each case I used a compass and made notes of the different effects of the three rigs. They all have their advantages and disadvantges Cat-wise, but I finally reverted to the Bermudan as being the handiest, simplest and closer winded of all. Good windward properties are, off course, essential for sailing in narrow waters, and it seems to me that one's choise of rig has to be made to meet the kind of sailing you do. Taken all round I don't think it matters which rig you use. I found the Bermudan best for my purposes and it seems to have the edge on other rigs as even the circumnavigators use it.

Northwich,
Cheshire.

T.C.Dands.

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ASTRO NAVIGATION.

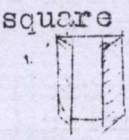
If you are not very good at Maths and are seeking a simple method of Astro Navigation, you would do well to consider Mary Blewitts book: 'Celestial Navigation For Yachttsmen', IO/6 net. This is a Yachting World publication and it uses the Air Ministry Tables. You would not need to know Trigonometry or worry about logarithms, in fact, if you can add and subtract about eight small numbers then that is all you need for a position line. The writer goes out of her way to make this book non-technical and easy to understand.

The nautical almanac or the air almanac can be used (with tables); the beginner will find the air almanac easier to start with. The book tells you which tables you require. You need only Vol. 3 for home wters for Sun, Moon, Planets and Stars which have a declination of less than 30.

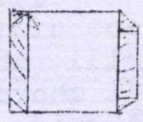
Battery electric clocks make a good substitute for Chronometers though you need to choose one with a 2nd hand. They can be rated to one or two seconds gain or loss per day.

How to make a modern Polynesian Catamaran in paper.

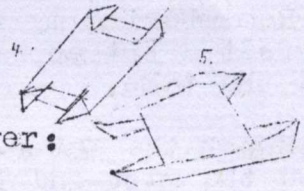
Take one sheet of paper 8" square and fold up two of the sides I" :

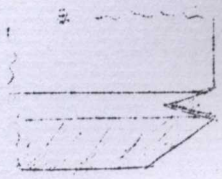


Then fold the corners like this:



Unfold and fold back on itself:
(inside)
Now turn over and fold up ends:





Finally, fold up hulls and turn over:

SIMON BROOKE

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Present Day Vessels Of Polynesia

The Harbour of Pago Pago, American Samoa, has become in recent years an excellent place to study the indigenous vessels of the South Seas. But first, a description of the Harbour.

Thanks to a 'Laissez Faire' policy on the part of the territorial government the harbour has grown in a normal fashion. On entering Pago Pago Bay the island dump may be noted on the starboard side. The reef here is slowly being extended with the deposit of 20th Century Kitchen midden, produced by a Polynesian society that consumes $10 million worth of disposables a year. On the port side the sewer pipes from the Hospital discharge spittel cups, syringes, bandages and nappies into the Bay. Further down the shore is located an artificial beach created for the tourist who wishes to comb among the cardboard and plastic flotsam. For the few who prefer to swim in the ocean (a chlorinated pool is nearby) the contamination count is only slightly above safe level. Further up the bay, which has now definately become a harbour, exists a large slick made by the confluence of the Pago Pago Intercontinental Hotel sewer outlet, and the pumping facilities of the Standard Oil of New Jersey.

The rest of the Harbour is bounded, on the left, by Centipede Row, early navy style, the main wharfs and, once again, a sewer outlet; this one contributes the pungent uncured variety from the entire bay area. At this point, the contamination count exeeds anything yet recorded by U.S.Public Health anywhere in the Pacific Ocean. On the right of the inner harbour an Asian fishing fleet of seventy-five ships and two canneries gives the water a glossy patina of blood, entrails and oil.

Like the harbour, the developement of the local vessels has been based on a free enterprise system that suplies the necessity for the boats as well as the materials for construction. Among the local craft the va'a'apa is the most numerous. These canoes are made from a single sheet of corrugated roofing metal. The sheet of galvinised steel is folded lengthways and the ends are nailed to short lengths of 2 x 4. Then the seams are filled with tar. (This method of construction would seem to be simpler than even the celebrated, well-proven, Polynesian V) The va'a'apa is used by the A'mauga, or young warriors, aged from 5 - 15, for voyages of pillage, piracy, (visiting yachts a speciallity), and plunder. A slat from a packing case supplies the motive power, while a plastic chlorine bottle, cut in half, keeps the vessel afloat.

The other indigenous craft found around this area, is the pao-pao. This vessel, an ingroth of the mighty War Canoe of yesteryear, is made from a hollowed out log 5 - 10' in length, with an outrigger firmly lashed to cross arms by use of telephone wire. Cracker tins, split open and pounde flat, are nailed to the bul warks to provide a measure of freeboard. Unlike the va'a'apa the pao pao may be painted. In Samoa such vessels are usually done in navy grey or Gas*blue. The pao pao is used for fishing and carrying goods in Pago Pago and other bays around the island. On one occaision a pao pao was recorded a Half-mile off shore.

There are many foreign boats in the harbour, although some, by the right of survivorship, may be considered indigenous. In this category can be found the many ex-navy craft left after World War Two, and a number of yachts whose voyages have terminated here. Notable by number if not design is the Trimaran. Two such vessels have been on moorings, unused, for three years. Another two have been beached and partially destroyed by the local craftsmen.

Thus we see as times change and as the primitive civilisations are touched by the technological advantages of space-age orientated Western man, new construction techniques are developed as new materials become available to meet the dawning of the 2Ist Century in ancient Polynesia. *(Government of American Samoa).

American Samoa. Grant Masland.

ORO OWNERS, UNITE!

ORO owners, we have been deliberately snubbed by that infamous editor of the world famed "Poly Cat" publication, "The Sailorman". That the insult was due solely to envy is hardly to be doubted. While ultimately little harm was caused by this affront, it still behoves all ORO owners and builders to unite in defence of our integrity as judges of the finest in yachting.

Let the small-hearted peck away at their enlightened betters. If we stand as a group, undivided, the glory of the ORO design will brightly shine, no matter how dark are the falsehoods, the immplications and innuendo, the gross lack of appreciaiton, or the petty downgrading by the highest authority.

For those who have not eyes or sufficient experience let us show these unfortunates that ORO is truly the Queen of the fleet, resulting from the ultimate perfection of Jimmy Wharram's genious (and from those of us who gave i recognition).

If "The Sailorman" chooses to devote the entire Ist issue to Polynesian Catamarans of every type, except the ORO?, and were it to continue publishing in that shameful vein, then it would do a bitter diservice to all future generations of potential ORO delighters.

Do not misunderstand. We, too, praise the meriTs of TANGAROA, RONGO/NARAI, TANE AND HINA; without them the pinnacle of ORO could not have been reached. And we are sure too, that the designers genius is evident in TEHINI, ARIKI and MAUI, yachts of the higgest order, all worthy Polynesian Handmaidens in the fleet of the queen, ORO !

California Wally Cookson.

That 'infamous editor' is also building an ORO and did not wish to display predjudice!

Marine Plywood and B.S.S. 1088.

All good Marine Plywood, we are told, should conform to B.S.S. 1088. Unfortunately, it is not unknown for the B.S.S. 1088 and the B.S.I kitemark to be stamped on material that does not meet the specified requirements. As Marine Plywood is an important and expensive item to P.C.A. members, there are seveal things we can do to avoid trouble and dissapointment.

Firstly, obtain a copy of B.S.S. 1088 and note carefully what it states concerning Marine Plywood.

Secondly, check as far as possible that the plywood used does comply with the specification, and insist on replacement of any sub-standard material.

Thirdly, if a salesman points out that B.S.S. 1088 plywood must withstand 72 hours in boiling water, ask yourself how often you propose to boil your boat?! Then ask the salesman what is the effect of repeated wetting and drying and, even more important, what effect does freezing have on wet plywood?

In my experience the commonest faults to be found are open deffects in surface veneers, and gaps over 0.20" wide between edges of joints in inner veneers.

If all members finding these or ther deffects write to:

British Standards Institution,
British Standards House,
2, Park Street,
London W.I.

they will be able to take action and the standard of manufacture of Mairne Plywood will rise for the benefit of all concerned.

Worcs. Don Ward.

Water Proofing Charts.

I find that wall paper laquer (made by several manufacturers) is the best thing to use. The one I used last was called 'Garsl'.

In applying these laquers use a 2" camel-hair brush applying about four coats to each side of the chart.

The laquer leaves the paper pliant and waterproof and does not effect the colour in any way, or cause shrinkages. It can be written on with a pencil and such markings are easy to erase. Also folding the chart does not effect the protective covering.

Salop. Glyn Davies.

Highly Inflamable.

It might interest readers or builders to know the result of a recent experimental test on expanded Polystyrine - the white, very light material used for insulating, ceiling tiles, buoyancy, etc..

The sort which I tried (ceiling tiles) was highly inflamable, and the briefest application of a flame set it alight and caused it to drop small pieces of tar-like substance, which would, in turn, ignite anything that they might fall on. If such material as this had been used on a boat for insulating or buoyancy, a dangerous situation could arise should a chance ignition occur.

There is, I believe, a form of expanded Polystyrine that does not continue to burn once the flame has been removed but I have not been able to get any of it in order to test it. I would be glad of any information (or names of suppliers) from other readers as to their experience with this kind of Polystyrine, and also the two part liquid kind which has to be mixed and oured into the required space.

Notts. Hans Meinhardt.

An ORO Cat Keen to Sail.

Wednesday was to be the big day. My ORO Cat, KUPE, would begin to look a bit like a boat. On the sunday I had a couple of hours to spare so I carefully joined the backbone to the stem and stern posts then up they went, on top of the inverted frames. Slap on some glue and hardener, drive home a few nails, and there she is. Time was running short so that I could only tack on some temporary spacers along the outside of the central cabin bulkheads, and to set the whole framework up on blocks.

At 5.30 a.m. on wednesday, I was awoken by a rising wind. Though it was still dark I got on some clothes and went down to the back garden to see how KUPE was doing. The wind had shifted the whole framework forward about a foot, off the blocks and onto the lawn ! The wind was getting gustier and stronger; what should I do? I raced up into the shed, took several lengths of scrap timber cut them into 2' lengths and sawed points on to them. If I drove one of these well into the ground on each side of each of the bulkheads, she would be secure again. I raced around the house, to the steps, down these and across the lawn - but just too . late.

I make the claim, without any pride, of being the first Polycat owner to have his craft go sailing so soon. A gust more powerful than any yet, lifted the framework into the air, carried it about twelve feet, and smashed it down into a tangled heap of splintered wood.

This small accident set production back five hours while I rebuilt the damaged parts and then set up ship again ready for the inner keel and inner stem and stern.

The moral of this story is that if you are building on an exposed site in an area where it may suddenly come up windy, do not just set your framework up on blocks, but also be sure to anchor it firmly to the ground or you also may have your Poly Cat go sailing while it is but a few hours old.

New Zealand. Peter Bugler.

The Chronicles of ANUANUA - Chapter 2.
In which Jim and Ken did find themselves at sea.

I. Behold the Shippe that Jim did draw and Ken did build now floateth upon the great waters, and it shall now be told how Jim and Ken did sail on the deep in the company of one Bob.

2. They did undertake a great and fearful voyage from the great, grey, oily river called the Mersey (all set about with petrol tanks). Having avoided the shoals of the Dee, they passed along the coast of Wales. Here great multitudes do dip themselves in the water and remove themselves therefrom because of the coldness thereoff. They then navigated around the Great Orme when gross darkness covered the sea, and they came safely into the Haven of Deganwy , where they would be, and great was the cheering of the good shippe BONGO, which was also at the same port.

3. Having completed this voyage, Ken and Jim did think it wise to begin to learn to sail the ANUANUA.

4. The next day, when Beryl and Rachel and Alistair did join the crew, was Jim rowed out to ANUANUA by many beautiful maidens, in a stately queen barge.

5. Then was Jim borne on board, still lashing the maidens with his tongue, and behold at his word was the Mizzen sail unleashed. At this did the boat swing round to the wind.

6. Then the maidens, with one accord, did haul in the heavy anchor and did thereby cover themselves in glory and much mud. The other sails were then spread and Beryl did take the tiller wherewith to guide the vessel between many ships into the narrow channel which leadeth to the great sea.

7. Then did ANUANUA begin to move at some speed much to the alarm of Ken, who was a man of little faith, and to the delight of Jim who nevertheless pretended to know all along that he did know that the shippe would sail.

8. By dint of great skill and the wise word of Jim, did Beryl steer the shippe safely out of the harbour. But not withoutthe help of a great and noisy seagul, for the current was contrary and the wind was as that of a babe.

9. Before much time was passed, ANUANUA drew perilously close to the shore where the natives of that place were gathered in alarm, fearing the wrecking of the shippe Now did Jim instruct the crew in the art of putting about.

10. 'Do not', he said, 'go about as the Dinghies do - spinning around suddenly - but do thou sail round in a dignified manner.'

11. 'Leave thou thy gib alone and do not touch it until the wind doth catch thine other sails and set them over'

I2. Then do thou lash the maidens of thy crew so that they suddenly let go the jib and do haul it in on the other side. Then shall the shippe leap forth on the new course.

I3. When this was done a great cheer went up from the shore where the natives saw that disaster was averted.

I4. Then did Jim look upon them with contempt, for he wished them to think that he knew the shippe would go about. So giving them the sign of the dual diggets, he quaffed his seventh cup of tea.

I5. Then did the crew sight some strange craft with only one hull which were sailing close-hauled. This did arouse in Jim great ire and at once ANUANUA was put onto the same course.

I6. When this was done, it was found that the shippe did sail just as close to the wind , and then did Jim smile once more.

I7. This was despite the fact that the sails of ANUANUA were rigged with sprits. Those with no brains had foretold that such sails would be as washing suspended by line and prop, but in this moment were such dolts confounded.

I8. Then did Beryl turn the Shippe towards harbour. The sail did fill full and the wind did come astern.

I9. With great speed did ANUANUA stand into the harbour, with streaming white wake. Then did Jim say to Ken 'Thou shalt bring the shippe to her anchorage.'

20. So did Ken quale in his shoes. (This was metaphorical as he was barefoot).

2I. However, not wishing to appear foolish, Ken brought ANUANUA round th harbour and up to her mooring. Owing to his small knowledge did he misjudge the way of the wind and he reached the place of anchorage at great speed.

22. In high alarm, he ordered the anchor to be dropped whereupon a great furmour was ploughed into the bottom of the sea. All the crew were seen to fall as one man into a heap for'ard. Then was Jim discovered to be on top as was his want.

23. When the tide did ebb the great furrow which the anchor of ANUANUA did make across the harbour became known, thenceforth, as Anchorage Creek.

24. Many other verses might be written about other adventures of ANUANUA - How the great Eric, son of Viking Jones, did rescue a large drum belonging to a noisy seagull, and how, in so doing, did become soaked, even unto his birthday suit.

25. Also how Ruth and Maggie did make much tea and did delight many with succulent food. Then how one Vron did much rowing, and how Diana looked into the sea and behold, her glasses did fall off and sha was as one blind until the tide went out.

Other tales can be told, but there is not enough room in many volumes to do so.

Cheshire. Ken Paterson.

Request from a prospective TANGAROA builder in Algeria.

Pierre Bonvillain would like to know if any TANGAROA owner - preferably living close to London - could offer him a day trial sail any time between August 18th and September 14th, 1968. If so, please write to:

Pierre Bonvillain,
7, Place Centrale,
Hydra,
Algiers, ALGERIA.

Useful Addresses, Notes.

1. Finnish Plywood Develop. Assoc.,
Finland House,
56, Haymarket,
London, S.W.1.

2. "Fin-Ply" up to 40' by 10' in single sheets (longer to order). This is exterior quality. (Builders to hire redundant Railway Goods sheds to reduce transport problems.!)

3. Finnish Plywood, Tongue and Groove ply boarding. (Intended for domestic / office flooring.)
Perhaps Polycat builders would like to try double diagonal planking thus?

4. No doubt builders who are interested will enquire from the F.P.D.A., who invite their enquiries.

Cornwall. A. Stanier.

POLYCAT POSSIBILITIES.

James Wharram stresses FLEXIBILITY as the key concept in his Polynesian Catamaran designs. And they certainly are flexible - in more ways than one.

Polycats have quite a lot in common with Mecanno sets. The basic unit and building block is a hull- and one may build one, two, three... such hulls, and assemble them experimentally into cats, or outrigger craft, or tris, or what have you. And if I find that my outrigger experiament, which looked quite promising on the drawing board, doesn't behave so well on the water, or just doesn'T suit me after all, I can simply return penitently to James Wharram's original plans and tiptoe back to the Polycat fold without having to scrap the lot.

The Polynesian Catamaran concept is Jim's gift to the incurable experimenter afloat. Sloop into Ketch or Yawl? Certainly no major surgery necessary! Try out Hydro-foil stabilization - justn out of curiosity -(had to add that since I don't wish to get Jim's fighting spirit up all that much) - sure, no problem; and no structural alterations that prove rather costly to undo again.

The hulls of a Polycat are joined by four cross-beams which may be disconnected without reso rting to a saw, as may be the bridge deck, fastened to them .

More scope for theexperimenter. And at no risk of having to live out his days with an immutable mistake,a "Sreve's Folly" polyflip or polyphant (or polypotamous) whose sight makes Jim wish the job had been done in ferrocement and filled with lead.

What's more - after all,most of us want a craft to sail,not a floating lab kit:the same Polycat that is at home on the high seas,could be converted temporarily and quite cheaply for a leisurely cruise along inland waterways. By sustituting shorter crossbeams ,and I8' 6" wide NARAI may be compressed into a craft whose beam does not exceed I3' and can motor through the French Canals - for the Midi, the maximum possible beam is given as I7'. And if in years to come one wanted to retire in a floating bungalow, peacefully anchored somewhere,why not?

With a hatch in the bridge deck between the two hulls, a Polycat would be hard to beat as a diving platform,and, though we are unlikely to stumble upon heavy chests full of Pieces of Eight - if we did come across one,hoisting it up wouldn't present any great problems to a Polycat sailorman.

And whilst I can't picture very well one of those encapsulated 'cocoon multihulls' with anything of a'deck cargo' - how does one rope anything to the wings of a jet plane? - a barrel of salt pork wouldn't look out of pl lashed to the deck of a Polycat.

Johannesburg,South Africa. P.Shreve.

EXTRACTS FROM READERS LETTERS.

P.Steward,Ipswich,
suggest that the Association has a small insignia/ badge or such like.

A.Knightbridge,Hythe,
has put access hatches in the bow and stern sections of his HINA and has offset the tillers to avoid them overlapping on full-helm.

E.Koh,Singapore,
will be producing kits and completed craft (standard and luxury version. He also sais that he would very much like to extend his yard facilities to other members of the Assoc..

G.Masland,Samoa,
has a HINA and it does well in a 5' - 6' sea with a 25 knot wind. No other boat in Samoa under 30' can make this claim.

At least half a dozen members have asked for accounts of sailing experiences enjoyed(?) by Polycat owners, so could we possibly have a few more of these?

J.Price,Lima,Peru,
is constructing a TANGAROA 3,000 miles from salt water in eastern Peru! Keeping construction weight down is a problem where good wood is mahogony or wood of a similar weight. At least the temps. of the Amason Basin do not hinder glue work.

J.Tomson, Liverpool,
is going to build a HINA in fibre-glass and also intends to build a master mold from which he hopes to produce hulls and complete boats,kits,or just bare shells. The prototype will be undergoing a trial run in June/July and Jim will have it to test for about a week, in July.

P.Tangvald,French Guiana,
What about getting Wharram or another multihull specialist to write an article discussing the respective merits of : Catamarans,Trimarans,single outriggers with the bow always at the same end;single outriggers with the float always to windward;craft stabalized by floats and Hydrofoils.
(Hope to offer this in the next edition.)

Galloway Shore.
If the landscape were raised a couple of hundred feet in those parts,there could be a broad river called Solaway. As it is there is a shallow sea between Cumberland and Scotish Galloway,and on the Galloway side a pattern of minor estuaries. Naval tide charts show that the main flow comes straight up the Irish Sea and smack into the Solway. When the tide is in these little estuaries have miles of sailing water for shallow draft craft;when the tide is out they have miles of hard mud,though with meandering fresh water flows which,in one or two cases, are enough tO get you home. Not every sailors cup of tea, the Galloway shore,west of southerness point, is naturally beautiful,wholly non-industrial,and not over-toured. There are plenty of sailing craft at Kippfrod,one or two at Kirkudbright and at Witham. There ought to be catamarans; in fact there are very few. Suspected reasons : a) Launching and retrieval difficulties;b) Liability to flip at moorings

I am going to have a try with a HINA this summer and will be glad of any tips from older hands with cats on moorings in tidal creeks.

Scotland. A.Brook.

Plastic hinges made of DEIRIN cost : 4/- a pair. (as opposed to I2/- a pair for Brass Hinges). They can be purchased at most ironmongers.

COST ANNALYSIS.

NARAI,
40' Polynesian Catamaran.

TIMBER : £220 / 0 / 0 Total cost excluding mast.
Prime Columbian Pine,delivered by;

Jowson & Sons ltd,
Stamp End,
Lincoln.

PLY : 2/- per sq. ft. Marina Ply (£I5/0/0 - I5 sheets).

Edgar Watson Co,.
I30,Canal Street,
Nottingham.

NAILS : Gripfast Nails : I" IO SWG I5/0 p.gross.

I½" " £I/0/0 "

2" 8 SWG £I/I8/0 "

York Marine Craft,
Worblington Street,
Bradford 8.
Yorks.

Galvinised Iron Nails: 2/3 per lb.

GLUE : 56 lbs Aerolite

: £ 7/0/0.

II lbs Hardener H.Meinhardt.

TANGAROA,

34' Polynesian Catamaran.

Paint	£ 4I.5.4.
Sails	£ I09.5.0
Timber	£ I69.I9.7.
Ply	£ I58.I.7.
Glue	£ 2I.4.4.
Fibreglass	£ 3I.7.4.
Nails & Screws	£ 29.0.0.
Filler	£ 3.7.5.
Beam Fittings	£ I3.0.0.
Perspex	£ II.I4.0.
	£ 588.4.II.

(These included expensive perspex and paint -best quality polyurethane).

Warps,rigging,anchors etc.. were extra. K.Paterson.

Many a true word spoken in jest

As a general warning to all readers,do be careful what you say when a group of you are sitting around a nice fire,in Sept-Oct,eating crumpets. One of you might just mutter the dreaded words "Let's sail round the world",and before you know where you are life has lost all sense of reason,you've saved more money than you knew existed and owe twice as much as youve saved.

We were sitting chatting when the awful words were uttered and all of us just sat there and said o.k.,we'll go. It wasn't even a sailing club bar,or within smell of the sea, but was in Dunstable,Beds, almost the furthest point inland; There were two non-sailors,one non-swimmer,and two dinghy/ limited monohull experienced sailors.

Within a week the place was flooded with literature about boats,large and small,multihull and monohull,new and o ld. They all had one thing in common,they were useless. If the size and state was right,then the price wasn't (£ 2000 being our price) and vice versa. The Mairne Mortgage people didn't want to know,there replies varying from curt "No's" ,to,"We would help you but it seems such an expensive way of committing suicide.

After a couple of months of complete failure,we were really depressed and almost giving the whole thing up,when one company suggested that we try Jim Wharram. The hunt was on - who the devil was Jim Wharram,and what were his designs like. Information was there to be found,and we found it. Here

was a strange salesman, someone who talked in facts and figures (stability figures, even) and who even lived and sailed on his own cat.

I/6d was invested in a brochure and the following week we flogged up to RONGO. Here, for the first time, we met a man who seemed to think we were quite sane, if a little ignorant, and who was fully confidant that we could do what we wanted to do. After half an hour it was us who were putting the arguements against, and Jim for. Jim won.

Once home again, I knew Jim was wrong; we were insane. We couldn't all swim, most of us can't sail, and only one of us has any reasonable carpentry experience, and we were going to build a 46' Catamaran and sail (we hope) over some 12,000 miles of ocean.

Now that we were quite happily settled into our new found insanity, we started looking for a place to build. Real problems here; we could not even find a wall to shelter her under. But perseverance paid off and out of the blue came a fabulous offer of a large barn, 3 miles away, with light and power - for only £2/0/0 p.w. The only problem was that we had to be out by June 1st, 1968.

We went off - the wood was ordered and promised, and promised and promised .... and eventually some of it came. It was descended upon and instantly chewed up by power saws and planes, and she started to take shape. In 4 weeks the first hull was turned over, and hours poured in like wter on Niagara. Friends came from miles to help and sweat, and still do.

We are now on our 16th week of construction, some 2133 hours of work and £600's later. One hull is just about finished and we turn the other over next weekend.

Our crew is made up of a draughtsman, a journalist, a managemant consultant (male), and a photographer, an ex-student, and a nurse (female). We launch in early July and leave the country in Summer '69. The boat - ORO - will cost about £1100 basic, £1400 ready for ocean cruising, she will have been built in six months by 6 people (with a lot of help) and looks fantastic.

To anybody in a similar position I would say - You are quite definately bordering on the edge of insanity, you are stupid in the extreeme, and inviting death at an early age - join the club!

Dunstable, Beds. N. Harford.

Many thanks to all who sent in contributions for the Magazine. Without these the 'Sailorman' would cease to function. With this in mind I will renew the request for any literary work that you may think will be of interest to other members of the Association (of which there are at the moment 95 members.) It does not matter whether it is a long article on sailing voyages, a few short lines on some point of construction that you have come across, or even a few words regarding cost annalysis, etc. The only thing that does matter is that you send these to me as often as you can.

Thankyou.

HINA news item.

This report on a HINA beam trough failure was sent in by J. G. Porter of Magnetic Island, Queensland, Australia, who is building a TANE design:

"You may recall I mentioned the owner of a HINA over in Townsville. It is a Mr. MacLean whom I saw the other day. I thought that I had not seen the boat around for some time, and I discovered why. One of the rear beam mounting cases on his boat gave way in choppy conditions, just outside the Harbour the other day. The two angle chock pieces on either side of the rear beam on the starboard float tore away from the bottom block of plywood, ripping of the top layers of ply (having been thoroughly glued, off course) and the small wood screws from the bottom up into the angle pieces were evidently not strong enough. No other damage was caused, as he dropped sail immediately, and the front two beams held the boat together while he got ashore."

On receipt of this letter, I checked up on one of the most hard sailed HINA'S, owned by Mr. Lautier, Holland. He continued his gusset pieces up the sides of his beam trough boxes to screw the gunwales too. This would give added strength to his beam trough boxes. Also I suggest putting a ¼" bolt through each gusset running into the stringer running below. We have put this alteration on all plans now sent out.

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The great 'skinning' problem.

On my TEHINI I am using scrap lengths of industrial nylon. Sufficient to cover the whole boat has cost me (I hope) £20. Another £20 will supply me with Aerodux Resorcinal glue. I'm skinning the boat, 51 foot long, to the gunwales.

Nylon sheathing done commercially in Britain goes under the trade name of 'Glasscover' (Dylon, in America) and is used in preference to fibre-glass skinning for power-boats entering tough power-boat races, because it flexes with the ply under the pounding. Polyester fibre-glass resin and fibre-glass cloth don't flex so much, and tend to peel.

Fibre-glass resins are a mystery to me; some fibre-glass skinned boats seem to have no problems but others crack and peel. Will some builder with specialized knowledge please contribute?

One builder has told me that he is using Epoxy Resin (Araldite) which is one of the strongest and most flexible adhesives known. His figures seem to show that his Epoxy resin to fibre-glass is about the same price per sq. ft. as the Aerodux glue I am using for my nylon.

Another builder quoting an Epoxy Resin said:
"If you meet it, spit on it for me."
Well, there you are; See the confusion.

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"Jim's Column."

I wish I had time to write a long and reasoned column but the sun is shining, birds singing, no gales blowing my polythene building shed, over TEHINI, to pieces!

The first hull of my TEHINI is ready for planking. No longer do I have to sit a little shame-faced and longing, listening to you people bosting about how fast you have done this and that. I am building my own sea-going catamaran. The world is mine. It's great to look at the Charts and Atlas again and think: "I will go there."

You builders now number at the time of writing this, April 29th, 232. We are the biggest group of sea-going catamaran builders and owners in the world.

50 builders gathered on January 6th, 1968, to begin the 'Polynesian Catamaran Assoc.' It was practically unanimous that there should be no Commodores, Admirals, Flags etc.., just three or four copies of 'Sailorman' a year, giving news of what we are all doing.

I am often described in polite yachting circles, as 'obstinate, dogmatic, and arrogant'. Really, these people should meet the builders - I am a soft-spoken appeaser compared to them!

One could rapidly raise a guerilla army by an advertisement in "The Sailorman". (In fact, one ex-guerrillaof Popski's private army is giving Maggie Oliver instruction in knife fighting!)

The general opinion amongst builders is that we are living in an effete society, and that modern Yachtsmen and Yacht Magazines reflect this trend.

Well, why should we not feel a little arrogant? Take the three lads in Dunstable, South of England. They are building an ORO: Nigel, a managing consultant, Dick, an Engineer, and Rick, a newspaper editor. In two months spare time work with the assistance of their girls, they have built one hull complete with inside furniture. Dragging the hull out of the barn, (in which they are building), it fell over on Rick. He survived. They are well on the way to finishing a 46' Catamaran. At the most the finished catamaran will cost them 500 £'s each. They have every reason to flex their muscles and feel proud. The equivelant sized commercial cat on the market costs about £I2,000-£I4,000.

Yet the space Yachting editors will give them in comparison to someone who has £I2000 to put down for a commercially built boat, will be, if any, minute.

I am not a yachting editor, so I cannot understand this evaluation of a person and his boat by the money he spends, (or wastes), on it. It does seem to the outsider as if the three lads from Dunstable represent a realistic dream that the average yacht magazine readers can identify themselves with, whilst the £I2000 boat buyer, (or even the £4000 boat), is as remote as becoming a spaceman.

In the first "Sailorman", I wrote:

"There will be a tendancy - in self-defence from the expensive commercial designers - to denegrate your boats as "amateur built" though in fact your 'labour of love' may contain a far higher standard of workmanship than any commercially built craft."

These lines were prophetic. There have been non- factual abusive attacks in 'Yachting and Boating' from Rudy Choy, his friends, and a friend of Dereck Kelsall.

Looking through RONGO's porthole at my new, partly built TEHINI my immediate feeling is, "So what? " I am off round the world - "Why bother?" but unless we defend our 'labours of love' we will find that when we come to sell them we will not be able to raise their true market value due to a determined whispering campaign.

This column is getting morbid - I am off to build my boat. Until the next edition of the "Sailorman" , or the Polynesian Catamaran Assoc. Meeting, or seeing you on RONGO, or aboard TEHINI,

in your part of the world,
Happy building and sailing,
James Wharram.

Recently I read an article in a yacht magazine by a leading man in a paint firm, on how useful, good, and how easy to apply his firm's Polyester paints were.

Unfortunately, one of his 'men' had privately told me in the past, that Polyester paint does not adhere as well to wood as does the same firm's old fashioned and cheaper Alkyd paints. Not that I needed telling! RONGO's polyester paint came off in beautiful sheets. (Anyone want some sheets of Polyester paints!)

This doubt about the Polyester paints, (after all we may have been stupid in applying it), was further confirmed when a friend of mine who is the head of the POLYMER section of a leading Technical College, told me how his Polyester paint job 'peeled'. He cannot be as stupid as us.

Another thought on paints. Some firms sell marine paint at one price, household or builders paint under another name at a lower price. Question : Is it "all the same paint?" I suspect it is. Maybe I am too suspitious of the commercial yachting world. Can anyone confirm or deny this rumour?

I went to Holland recently to give a lecture on my voyages and took the opurtunity to visit Museums and the Dutch Boat Show, which, though smaller than the British Boat Show, I thought was better.

I particularly noticed that all spritsails that were laced to the mast on trditional Dutch Boats, were not laced tight , but the luff of the sail was at least the thickness of the mast <u>away</u> from the mast; sometimes more.

For centuries, the Dutch traditional boats have had to

work well to windward in narrow waters. Question : Is this wide separation of the leading edge of the sail from the mast a crafty dutch idea to avoid wind eddies from the mast, on the leading edge of the sail, and so improve windward performance? (Without all the difficulties of pear shaped, or revolving masts?) Someone who is using lacing instead of track might try a few experiaments, and write up there ideas for the 'Sailorman'.

Another point reported about the sprit-rigged HINA. In strong forces 6 - 7 winds, she can be difficult to tack for the mainsail bags due to wind pressure and lack of a boom. This stops her coming close enough to th wind for the gib to back and swing the boat on the other tack. Stronger blocks for the mainsheet will solve this problem. Likewise, the main sail must be cut flat or perhaps a temporary boom used. Don't hesitate to gibe or ware the ship around if you are caught out in this predicament.

Dereck Dutton of ;
"Remnants Galore"
Market Hall,
Market Street,
LLandudno,
North Wales;
flogged us the short ends of industrial nylon for sheathing TEHINI ; Sheet material and gay coloured fabrics for Sarongs and cushion covers.

To get our own back we flogged him a set of TANE plans. He might be useful to other builders , for reasonably priced fabrics;

from RONGO.

General Notes.

All are reminded that advertisement space in this magazine is available at extremely economical cost. Manufacturers please note! !

Please inform the editor as soon as possible of any known launching dates which she will publish in the near futre.

UNITED KINGDOM.

'ORO',46'.

5. C.F.Cooper,I3,Gordon Rd,Peckham,London.S.E.I5.
6. N.R.Harford,2a,Chiltern Rd,Dunstable. Beds.
8. D.Ward,IIa,Brook Street,Wordsley,Nr. Stourbridge. Worcs.
IO.M.J.Hodgkins,Blessington Poultry Farm,Blessington,Co Wicklow. EIRE.
I3.A.Rudd,44,Whitfield Lane,Meswall,Wirral. Cheshire.

'RONGO'

I. Jack Gale,I4,Kilteragh Drive,Doxrock,Co.Dublin. EIRE.
2. T.Thomas,D3,Room I22,U.K.Atomic Energy Auth.Culham Lab,Culham Abingdon Berks.
3. M.Hurst,Poste Restante,Glasson Dock, Fleetwood.

'NARAI',40'.

I. B.Orrell,36 Helin Close,Bowness-on-Windermere, Westmorland.
3. H.Meinhardt,20 Buckley Drive,Calverton, Notts.
5. R.Pearce,I69 Albert Rd,Stechford, Birmingham 33.
7. J.Teal,7 Hollybank Ave,Battey, Yorks.
9. Major T.S.Morgan,Army Apprentices College,Chepstow, Mons.
II. J.Shepherd,IO Wordsley Close,Wordsley Rd,.Immingham, Lincs.
I4. R.Gunton,I95 Kingshill Ave,Northolt, Middx.
I5. E.Bradley,5 Lochar Crescant,Glasgow. S.W.3. SCOTLAND.

'TANGAROA',34'.

I. E.Jones,329 Underwood lane,Crewe, Cheshire.
3. K.Goble,28 Amberbanks Rd, Blackpool.
4. K.Patterson,Royal Oak Chambers,Village Rd,Nr. Bebington, Cheshire
5. J.Luty,II Roscoe Mount,Chapeltown Rd,Leeds 7, Yorkshire.
6. J.Corke,I40 Somerset Rd.Southall, Middx.
8. D.Fenn,I7 West Ave,Donnington Salop.
9. J.Nettleton,47 Tithe Barn's Street.,Horbury,W.Yorkshire.
IO. H.Peden,II Craiglee Gardens.,Kilrea, Co. Derry. IRELAND.
II. J.Barbut,I65 Honoroak Rd,Forest Hill, London S.E.23.
I3. G.Armitage,24 Albert Rd, Manchester I9.
I9. R.C.Noble,8 Woostock Rd,Molesey,Birmingham I5.
24. I.Stewart,Bridge Mount,Jacksons Lane,Hazel Grove,Cheshire.
27. M.Powell,660 Manchester Rd,Meirs Bridge,Huddersfield,Yorks.
30. A.David,60 Comun Rd, London S.W.II.
3I. J.Leach,I04 Montgomery Rd,Ipswich Suffolk.
34. A.Brown,II Cleveland Close,Walton-on-Thames, Surrey.
35. P.Johnson,I3 Rollscourt Ave.,Herne Hill.London S.E.24.
36. A.Leech,The Lodge,Aclebridge,Norfolk.
38. K.Cook,[illegible] 2 Mowbray Grove,Old Swan Liverpool.
40. N.Johnson,H.M.S.Conway,Llanfairpwell, Angelsey.
4I. Sqr. Lead. A.K.Amos,R.A.F.,22 Allard Crescant,Bushey Heath Herts.
42. R.Harrison,45,Liss RdSouthsea,Hants.
43. C.T.Howse,Barford,Combe Lane,Widemouth Bay,Bude, Cornwall.
44. A.Brook,Millcombe Farm,Blackairton,Nr. Totnes.S.Devon.
45. G.Holley,I6 Woodverton Gdns,,Ealing W.5.
49. J.Grzybek,269 Upton Lane,Forest Gate London.E.7.

'TANE',

4. N.A.Wilson Smith,Sunlair,Wivelscombe,Somerset.
5. P.Stultiens,4I Creswell Rd ,East Twickenham,Middx.
6. E.Beecham,IO Delfby Cres., Southdene,Nr. Liverpool Lancs
II. B.Parkinson,Little Tardsrik,Blackpool Rd,Kirkham,Nr Preston.
I4. M.D.Redload,87 The Broadway,Thorpe Bay Essex.
I8. A.B.Johnson,West Chevington Wood,Nr.Morpeth,Northumberland.
I9. Jerry & Irene,&Chelsea Rd,Aintree,Liverpool 9.
22. B.Watson,I Sandfield Rd,East Sleekburn,Bedington,Northum.
24. R.Jackson, I3 Windermere Rd,Whitby,Ellesmere Port,Wirral,Chesh.
25. A.J.Sills,Red House Farm,Saxtead,Woodbridge ,Suffolk.

'HINA',2 '.

I. P.A.Watson,44,Brauncewell Rd.,R.A.F.Cronwell,Sleaford,Lincs.
2. J.Boyagis,30,Portobello Rd., London W.II.
3. A.Stanier,Liskerret,Forder,Saltash,Cornwall.
4. J.D.D.Lyttle,Richill Castle,Co. Armagh,Ireland.
5. K.Hampson,3,Needles Bank,Godstone,Surrey.
7. Rev. J.L.Macleod,Manse,Latheron,Caithness.
II. T.Browne,3,Marine Terrace,Malahide,Co.Dublin. EIRE.
I3. M.Lowe,St.David's School,Llandudno,N.Wales.
I5. D.Eury,Sarnia Marin Agency,3,La Cloture,L'Ancresse,Vale, Guernsey,CHANNEL ISLANDS.
I6. D.Buck.The Lantern House,Sandy's Way ,Chertsy Lane,Staines,Mid
I7. E.L.Mould,35,Meeson Street,Clapton,London E.5.
30. F.O'Farrell,24,Duke St.,Dublin 2. EIRE.
33. M.Lee,95,North Rd,Poole Dorset.
35. C.H.Sutcliffe,27,Moorfield Rd,Denham,Bucks.
36. M.Sexton,"Greengates",Kings Rd,Alton,Lancs.
38. J.Johnes,302,Jersey Rd,Bonymeen,Swansea.
42. G.Horseley,Allewton,2,Balck Dyke Lane,Upper Poppleton, Nr. York,W.R. of Yorkshire.
44. L.Hill,8,Maidstone Ave,Chorlton-cum-Hardy,Manchester 2I.
45. C.M.Caldon,630,Wellesley Rd,Methill,FIFE.
46. R.Berry,3I, Canterbury Rd,N.Harrow,Middx.
48. A.Knightsbridge,24,Elgin Close,Hythe,Hants.
50. L.Russell,II,Alderney Rd,Slade Green,Kent.
53. A.Bullen,25,Lord St,Burscough,Ormskirk,Lancs.
55. J.Noton,Medway,Mill Lane Ness,Wirral.
57. J.Tomson,27,Main st,Old Humberstone,Leicester.
58. T.Dands,2I,High St,Northwich,Cheshire,
6I. E.Davies,I3,West Place,Gobowen,Nr. Oswestry,Salop.
63. D.Atkinson,I49,Hivings Hill,Chesham,Bucks.
64. E.Berggvist,98,Seel st, Liverpool I.
65. T.Brook,75,Craiglockhart Rd,Edinburgh II. SCOTLAND.
66. 2nd Officer R.S.Larking,M.V.British Renown,c/o B.P.Tanker Co. Ltd.,Britannic House,Moor Lane,London. E.C.2.
67. Sq. Ldr.R.W.Drabble,IO,Hastings Ave,R.A.F. UPAVORI, Pewsey,Wilts.
69. C.Stratton,"Toppins",26,Fay Rd,Horsham,Sussex.
72. W.Hagger,I37,Collier Row Lane,Romford,Essex.
74. J.Moore,6,Dartmouth St,Stafford.
77. J.Bowden,220ld Green Rd,ST.Peter's,Broadstairs,Kent,
79. R.Rowley,3,Holley Grove,Lion St,Stourbridge,Worcs.
8I. G.Reilly,3,West Brae,East Wemyss,Fife, SCOTLAND.
82. W.Pawley,c/o Dictograph Telephones Ltd.,Abbey House, Westminster.S.W.I.
84. Maj. R.Edwards,39,Leagomery Rd,Wellington,Shropshire.
90. R.Graham,Prospect Garage,Prospect,Nr. Aspatria,Cumberland.

'MAUI',I6'.

I. H.Wharram,Poste Restanta,Deganwy,N.Wales.
2. St.David's College,Llandudno,N.Wales.
4. J.Reid,I72,Westoe Rd,South Shields,Co.Durham. IRELAND.
5. J.Corke,I40,Somerset Rd,Southall,Middx.

FRANCE.

'TANGAROA',34'.

I2. J-P.Aubry,Le Bambois,AILLEVILLERS,Hte.Soane, FRANCE.
5I. M.Ferrand,28,Bd Emille Zola,I6,Cognac,FRANCE.

'HINA' .

68. P.Bonvillain,7,Place Centrale,Hydra,Algiers,Algeria.

89. L.F.Gancel,'Multicoques France',Brevands 50,B.F.Carentan, FRANCE.

SPAIN./ Portugal / Italy/ Monaco.

'HINA'

29. J.Jover,Buenos Aires 46,3°-4° Barcelona,SPAIN.
31. D.R.Pearce,Villa Luce,Binisafua,San Luis,Menorca, SPAIN.
54. F.De Canto Brum,Rua Da Madlaena,68,Lisboa-2,PORTUGAL.
62. J.Warrick.Presso Cambride School of English,Associacione Imprenditon Abbigliamento,Via Rovighi 41,Carpi,(Modena) 41012 ITALY.
75. H.Jepson,Residence Anteaul,Boulevard Tenao,Monte Carlo, MONACO.

'NARAI'.

E.Tross,Via R.Stasi 53,Tomba di Nerona 00189,Rome,ITALY.

****

DENMARK / BELGIUM / FINLAND.

'NARAI'.

4. B.Jensen, Hundie Strandvej 135,Greve Strand,Denmark.

'TANGAROA' ----------

22. L.Caesar,88 Mergelpoetstraat,Vilvorde,BELGIUM.
53. J.Cortsen,Offert Fishersgade 47,1311 KbH K Denmark.

'HINA'

41. C.Peterson,Ndr.,Boulevard 23.Varde,DENMARK.
43. G.A.Elfving,Helsingfors 52,FINLAND, Gumtaegsvaegen,3, Postfack 52033.
71. C.H.Grange,9 Place Phillipe,Werrie,Bruxelles 9,BELGIUM.

HOLLAND.

'TANGAROA'.

14. H.Heupers,Dollardstraat 192,Amersfort,HOLLAND.
29. Stellingwerf,Jan Vermeer Str, 26,Hoakeskergen,HOLLAND.

'TANE'

1. J.Deerson,Philips B.A.Complex,Hurksestraat,Eindoven,HOLLAND.

'HINA'.

8. E.Lautier,Stationsweg 56,Ede, HOLLAND.
9. H.Klazes,Willem De Zwijgerlaan 148,Amsterdam HOLLAND.
10. C.M.Hoogenboom,Boezemweg 18,Dirksland HOLLAND.
18. D.Mellema,Doorn,Kortenburglaan .15, HOLLAND.
22. A.Slotemaker,Spiegelenburghlaan 13,Aerdenhout-N.H. HOLLAND.
27. Theo Gruter, /o Josef Israelslaan 76,Arnhem,HOLLAND.
47. D.H.Boon,Pretoriusplein 18, III,Amsterdam,HOLLAND.
49. Prof.I.J.Erkelens,Merkelbachlaan 6,Eindoven,HOLLAND.
78. K.J.Smut,S.V.D. Missieprocucit,Teteringen,HOLLAND.

U.S.A. & CANADA.

ORO.

4. W.Cookson,I75%,N. Orange Drive,Hollywood,California.90028.
9. G.Iarique,I04,Dorchester Drive,Bramalea,Ontario,CANADA.
I2. H.Goddard,4880 Queen Mary Rd,Apart.I2a.Montreal,Quebec CANADA.

NARAI.

2. P.Curley,c/o Post Office,Empire L.A. U.S.A.

TANGAROA.

28. R.Sheridan,I053 Balsam Street,White Rock,B.C.CANADA.
46. D.Terry,Madison Rd,Durham Connecticut,D.6422. U.S.A.
48. C.Mcgory,Apt. II07,I00 Rosebury Rd,Toronto I9,Ontario CANADA.

TANE.

3. J.Gold,I07,W.Kirkwood Ave,Merrick II566,New York.USA.
I2. A.Prigge,267,Moore Park Ave,Willowdale,Ontario ,CANADA.

AUSTRALIA, & NEW ZEALAND.

ORO.

2. J.Jarman,Bow 7,P.O.Mordiallog,Victeria,Australia.
3. P.Bugler,5,Rutland St,Picton,NEW ZEALAND.

NARAI.

8. A.Mcness,Central P.O.,Sydney,AUSTRALIA.

TANGAROA.

I5. L.Ali,22,Shasta Ave,Brighton,Melbourne,AUSTRALIA.
I6. R.Highden-Smith,I0,Melinda,St,Southport,Queensland,AUST.
I7. E.Hughes,3,Constable Crescant,Onehawa,Napier,NEW ZEALAND.
2I. J,Thornburrow,R.D.3,Napier,NEW ZEALAND.
23. W.Armstrong,7I0 Nepean Highway,Carrum,Victoria,AUST.
37. D.Holder,Channel I0,Bow I0,PO Lane Cove,N.S.W. AUST.
39. K.Halpin,49,Earl st,Doonside,Sidney,AUST.
52. K.Felinger,73,Cardwell st,Canley Vale,N.S.W. AUST.

TANE.

I0. R.DOhrn,78,Toorak Rd,South Yarra,Victoria,AUST.
7. R.Thornton,(Mens Quarters) c/o Munda House,Brighton,S.AUST.
8. B.Milne,Carnarvon Tracking Station,Carnarvon,W.AUST.
I3. J.Porter,c/O Nelly Bay,P.O.Magnatic Island,Via Townsville AUST.
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